



Report to: General Committee

Meeting Date: February 19, 2019

SUBJECT: Award of RFP 224-R-18 Consulting Engineering Services for Cast Iron Watermain Replacement/ Rehabilitation Design and Contract Administration

PREPARED BY: Prathapan Kumar, Senior Manager, Ext. 2989
Flora Chan, Senior Buyer, Ext. 3189

RECOMMENDATIONS:

- 1) THAT the report entitled “Award of RFP 224-R-18 Consulting Engineering Services for Cast Iron Watermain Replacement/ Rehabilitation Design and Contract Administration ” be received;
- 2) AND THAT the Phase 1 (Laureleaf Area) detailed design work under contract 224-R-18 Consulting Engineering Services for Cast Iron Watermain Replacement/ Rehabilitation Design be awarded to the highest ranked, lowest priced Bidder, LEA Consulting Ltd., in the amount of \$289,391.19, inclusive of HST;
- 3) AND THAT a 10% contingency in the amount of \$28,939.12, inclusive of HST, be established to cover any additional design costs for Phase 1 (Laureleaf Area) and that authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy;
- 4) AND THAT the Consulting Engineering Services for Phase 1 (Laureleaf Area) detailed design award in the amount of \$318,330.31 (\$289,391.19 + \$28,939.12) be funded from the capital project 053-6150-19242-005 “Cast Iron Watermain Replacement – Design”;
- 5) AND THAT the remaining budget of \$88,669.69 in capital project #19242 “Cast Iron Watermain Replacement – Design” will be returned to the original funding source;
- 6) AND THAT the 2020/21 contract administration and design work under contract 224-R-18 Consulting Engineering Services for Cast Iron Watermain Replacement/ Rehabilitation Design be awarded to the highest ranked, lowest priced Bidder, LEA Consulting Ltd., in the following amounts (inclusive of 10% contingency):
 - 2020 Contract Administration Phase 1 (Laureleaf Area) in the amount of \$277,435.61 (\$252,214.20 + (\$25,221.42 - contingency))
 - 2020 Design Phase 2 (various locations) in the amount of \$289,042.26 (\$262,765.69 + (\$26,276.57- contingency))
 - 2021 Contract Administration Phase 2 (various locations) in the amount of \$264,395.07 (\$240,359.15 + (\$24,035.92- contingency))
- 7) AND THAT the Consulting Engineering Services for construction and design award amounts for 2020/21 be requested as part of the 2020 and 2021 Capital budget process, subject to Council approval of the respective years capital budgets;
- 8) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to obtain Council approval to award the contract for Consulting Engineering Services for Design and Contract Administration for the following:

- (a) **Phase 1:** Cast Iron Watermain Replacement Replacement of approx. 4,000 m length in Laureleaf area (refer to Attachment A); and
- (b) **Phase 2:** Rehabilitation of approx. 4,200 m length of Cast Iron watermain with Cured in Place Pipe (CIPP) lining at various locations. (refer to Attachment B)

BACKGROUND:

The scope of work under this award includes engineering services and all other sub-consultant services related to replace and rehabilitate the cast iron watermain.

The scope of work includes, but not limited to the following:

- Background Review and Data Collection
- Topographic Survey
- Sub Surface Utility Engineering Survey
- Geotechnical Investigation
- Tree Assessment
- Preliminary Design and Cost Estimates
- Detailed Design and Cost Estimates
- Preparation of Tender Documents

Additionally, after construction award, the consultant will provide contract administration and construction inspection services during the implementation of the project anticipated to be spread over a period of 2 years and post construction and warranty period inspection services. The consultant will retain specialist consultants to provide their services for arborist, or any other specialty consultant that may be needed during the construction phase.

Bid Information:

Bids closed on	November 21, 2018
Number picking up the Bid document	16
Number responding to the Bid	10

Proposal Evaluation:

The Evaluation Team was comprised of staff from the Environmental Services Department and facilitated by staff from the Procurement Department. Due to the complexity of the project, staff wanted to ensure that bidders had the necessary qualifications and experience to carry out the work and as such, the City released this RFP utilizing a two-stage process.

Stage One (1) – Technical Evaluation:

Under Stage 1 – Technical Evaluation, Bidders were assessed against pre-determined criteria as outlined in the RFP; Experience/Past Performance of the Company 15%, Similar Five (5) Projects completed within the last 5 Years 5%, Qualifications and Related Experience of the Project Manager and Project Team 30%, Project Delivery 20% totaling 70%. Upon completion of Stage 1 (technical evaluation), the Price Proposal (Bid Form) provided by those Bidders who

qualified from Stage 1, (minimum score of 75%, or 52.5 points out of 70 required), proceeded to Stage 2 for price evaluation.

Stage Two (2) – Price Evaluation:

Based on the Stage 1 evaluation, Bidders who received a minimum of 75% or 52.5 points out of 70 proceeded to Stage 2 - Price Evaluation. The price proposal provided by the Bidders is evaluated out of 30 points, based on the criteria outlined in the RFP.

Stage 1 & 2 – Combined Overall Scoring

The scores from the Stage 1 and 2 evaluations were combined to formulate final overall scoring, as summarized below:

Bidders	Score out of 100 points
LEA Consulting Ltd.	91.6
R.V. Anderson Associates Limited	84.0
Chisholm Fleming & Associates	82.5
Accardi Schaeffers & Associates Ltd.	82.3
Wood Environment and Infrastructure Solutions	82.2
Environmental Infrastructure Solutions Inc.	81.8
Associated Engineering (Ont.) Ltd.	76.6
CIMA Canada Inc.	68.3
The Municipal Infrastructure Group Ltd.	50.0
RA Engineering Inc	48.0

*Bid Prices ranged from \$1,044,730.23 to \$1,618,528.8.

LEA Consulting Ltd., the highest ranked bidder with the lowest price, demonstrated a good understanding of the project, had an experienced and qualified project team and illustrated a comprehensive plan and methodology for the project.

Project Schedule:

Phases	Anticipated Commencement	Anticipated Substantial Completion
Phase 1 – Cast Iron Watermain Replacement Design (Laureleaf Area)	April 2019	Nov 2019
Phase 1 – Cast Iron Watermain Replacement - CA (Laureleaf Area)	April 2020	Dec 2020
Phase 2 – Cast Iron Watermain Rehabilitation using CIPP Liner - Design (various locations)	Jan 2020	Aug 2020
Phase 2 – Cast Iron Watermain Rehabilitation using CIPP Liner – CA (various locations)	April 2021	Dec 2021

FINANCIAL CONSIDERATIONS AND TEMPLATE:**Design Services for Cast Iron Watermain Replacement (Laureleaf Area):**

The following table summarizes the financial considerations:

Phase 1 - Design	Budget Available for Design (A)	\$407,000.00	053-6150-19242-005 " Cast Iron Watermain Replacement - Design" (Pre-approved)
	Less: Design Award for Phase 4 (B)	\$289,391.19	Award to LEA Consulting Ltd. (incl. of HST impact)
	Less: Design Contingency (10%) (C)	\$ 28,939.12	
	Total Cost of Phase 1 - Design (D) = (B) + (C)	\$318,330.31	
	Budget Remaining (E) = (A) - (D)	\$ 88,669.69	*

* The remaining budget of \$88,669.69 will be returned to the original funding source.

Future Design + Contract Administration Services for 2020 and 2021:

The Purchase Order for the phases identified below will not be issued until 2020 and 2021, issuance of the Purchase Order will be subject to Council approval of the respective year's Capital Budgets. Under this award, Staff are able to lock in pricing for the design and contract administration and contract inspection required in these years.

Phase 1 - CA	2020 Budget	N/A	Subject to Council approval of the 2020 Capital budget
	Contract Administration – Phase 1(F)	\$252,214.20	
	CA Contingency (10%) (G)	\$ 25,221.42	
	Total Cost of Phase 1 CA (H) = (F) + (G)	\$ 277,435.61	
Phase 2 - Design	2020 Budget	N/A	Subject to Council approval of the 2020 Capital budget
	Rehabilitation Design – Phase 2 (I)	\$262,765.69	
	CA Contingency (10%) (J)	\$ 26,276.57	
	Total Cost of Phase 2 - Design (K) = (I) + (J)	\$289,042.26	
Phase 2 - CA	2021 Budget	N/A	Subject to Council approval of the 2021 Capital budget
	Contract Administration – Phase 2 (L)	\$240,359.15	
	CA Contingency (10%) (M)	\$ 24,035.92	
	Total Cost of Phase 2 – CA (N) = (L) + (M)	\$264,395.07	
Total Cost of Phase 1 CA + Phase 2 Design + CA (O) = (H + K + N)		\$830,872.94	

The cost estimate for Phases 1 and 2 contract administration is based on an estimated construction period of 35 weeks. The construction period may change subject to detailed design and therefore the purchase orders may need to be adjusted.

OPERATING BUDGET AND LIFE CYCLE IMPACT

The constructed PVC watermain is estimated to last for 90 years and CIPP lining to last for 50 years. As such, there is no incremental impact to life cycle reserve study over the next 25 years. There is no incremental operating budget impact.

ALIGNMENT WITH STRATEGIC PRIORITIES:

The proposed cast iron watermain replacement/ rehabilitation programs are in line with City's goal to provide better quality services to the public and is consistent with the Building Markham's Future Together strategic priority on the "Growth Management" and "Environment" as it considers sustainability on the built environment.

BUSINESS UNITS CONSULTED AND AFFECTED:

Finance department has been consulted and their comments have been incorporated.

RECOMMENDED BY:

2019-02-06

A handwritten signature in black ink, appearing to read 'Phoebe Fu', is written over a horizontal line. To the left of the signature is a large 'X' mark.

Phoebe Fu
Director, Environmental Services
Signed by: cxa

2019-02-06

A handwritten signature in black ink, appearing to read 'Brenda Librecz', is written over a horizontal line. To the left of the signature is a large 'X' mark.

Brenda Librecz
Commissioner, Community & Fire Services
Signed by: cxa

ATTACHMENTS:

[Attachment A & B – Watermain Replacement - Phase 1 & 2 Areas](#)